

**Remarks**

Applicants have amended the Specification, the Claims and the Abstract to place them into better form for examination on the merits and allowance. A Substitute Specification (marked-up version and clean copy) is enclosed.

Passage to the appropriate art unit for examination on the merits is respectfully requested.

Respectfully submitted,



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Table 2

Steel pipe No.	Steel No.	Cooling after pipe[1] making	Hot workability		Composition			Tensile properties		Corrosion resistance		Remarks
			Presence of crack generation	Types*	Amount of martensite (percent by volume)	Amount of ferrite (percent by volume)	Amount of austenite (percent by volume)	YS (MPa)	TS (MPa)	Corrosion rate (mm/yr)	Presence of pitting generation	
1	A	Water cooling	-	M+F+y	75.8	13.5	10.7	823	984	0.108	No	Example
2		Air cooling	No	M+F+y	73.2	14.6	12.2	819	980	0.114	No	Example
3		Air cooling	No	M+F+y	55.1	30.3	14.6	864	996	0.093	No	Example
4	B	Water cooling	-	M+F+y	56.9	25.2	17.9	843	994	0.097	No	Example
5		Air cooling	No	M+F+y	54.5	26.7	18.8	838	989	0.101	No	Example
6	D	Air cooling	No	M+F+y	62.3	32.9	4.8	867	1009	0.105	No	Example
7	E	Air cooling	No	M+F+y	65.4	15.2	19.4	823	980	0.098	No	Example
8	F	Air cooling	No	M+F+y	58.6	28.4	13.0	775	974	0.094	No	Example
9	G	Air cooling	No	M+F+y	57.9	26.1	16.0	849	981	0.076	No	Example
10	H	Air cooling	No	M+F+y	66.9	17.4	15.7	836	969	0.104	No	Example
11	I	Air cooling	No	M+F+y	61.4	32.4	6.2	816	972	0.142	No	Comparative example
12		Air cooling	No	M+F+y	78.2	10.2	11.6	763	989	0.139	No	Comparative example
13	K	Air cooling	Yes	M+F+y	77.1	1.5	21.4	818	973	0.105	No	Comparative example
14	L	Air cooling	Yes	M+F+y	76.6	2.9	20.5	812	958	0.132	No	Comparative example
15	M	Air cooling	No	M+F+y	74.6	16.1	9.3	834	969	0.174	No	Comparative example
16	N	Water cooling	-	M+F+y	59.6	33.6	6.8	829	984	0.096	No	Example
17		Air cooling	No	M+F+y	57.8	33.9	8.3	821	980	0.100	No	Example
18	O	Water cooling	-	M+F+y	41.9	57.2	0	573	916	0.134	Yes	Comparative example
16	P	Air cooling	No	M+F+y	46.2	50.9	2.9	691	892	0.097	No	Example
17	Q	Air cooling	No	M+F+y	34.5	62.9	2.6	669	875	0.081	No	Example
18	R	Air cooling	No	M+F	83.1	16.9	0	964	1051	0.125	No	Example
19	S	Water cooling	-	M+F	72.9	27.1	0	1012	1114	0.119	No	Example
20		Air cooling	No	M+F	71.8	28.2	0	1004	1105	0.122	No	Example
21	T	Air cooling	No	M+F+y	62.7	18.8	18.5	855	990	0.097	No	Example
22	U	Air cooling	No	M+F+y	64.3	19.5	16.2	870	1002	0.095	No	Example
23	V	Air cooling	No	M+F+y	53.7	27.7	18.6	837	929	0.074	No	Example
24	W	Air cooling	No	M+F+y	52.6	28.1	19.3	858	964	0.075	No	Example

\*) M: Martensite, F: Ferrite, γ: Retained austenite

Table 3

Steel pipe No.	Site el No.	Cooling after pipe[1].making	Heat treatment				Composition				Tensile properties		Corrosion resistance		Remarks
			Quenching			Tempering	Types*	M (percent by volume)	F (percent by volume)	γ (percent by volume)	YS (MPa)	TS (MPa)	Corrosion rate (mm/yr)	Presence of pitting generation	
			Heating temper- ature (°C)	Cooling	Cooling stop temper- ature (°C)										
2-1	B	Air cooling	920	Water cooling	70	580	M+F+γ	55.1	30.3	14.6	864	996	0.093	No	Example
2-2		Air cooling	920	Air cooling	70	580	M+F+γ	50.7	32.5	16.8	845	972	0.101	No	Example
2-3		Air cooling	920	Air cooling	70	650	M+F+γ	45.8	33.0	21.2	720	955	0.103	No	Example
2-4		Air cooling	890	Air cooling	70	580	M+F+γ	46.7	31.6	15.1	850	985	0.099	No	Example
2-5		Air cooling	860	Air cooling	70	580	M+F+γ	55.1	30.5	14.4	860	991	0.095	No	Example
2-6	S	Air cooling	920	Air cooling	70	580	M+F	71.8	28.2	0	1004	1105	0.122	No	Example
2-7		Air cooling	920	Air cooling	70	650	M+F	69.2	30.8	0	984	1030	0.124	No	Example
2-8		Water cooling	-	-	-	550	M+F	70.2	29.8	0	968	1011	0.122	No	Example
2-9		Air cooling	890	Air cooling	70	580	M+F	73.2	16.8	0	1014	1120	0.118	No	Example
2-10		Air cooling	920	Air cooling	70	580	M+F+γ	62.1	19.3	18.6	857	995	0.096	No	Example
2-11	T	Air cooling	920	Air cooling	70	580	M+F+γ	63.2	18.8	18.0	849	991	0.094	No	Example
2-12		Air cooling	920	Air cooling	70	620	M+F+γ	59.5	18.6	21.9	805	956	0.077	No	Example
2-13		Air cooling	850	Water cooling	70	580	M+F+γ	62.4	19.2	18.4	843	986	0.096	No	Example
2-14		Air cooling	850	Air cooling	70	580	M+F+γ	64.8	17.7	17.5	837	984	0.097	No	Example

\*) M: Martensite, F: Ferrite,  $\gamma$ : Retained austenite